

September 2006  
03-PLA-028, KP 14.8/16.5 (PM 9.2/10.3)  
EA 03256-0C9300  
Kings Beach Commercial Core Improvement Project  
\$31.3 million

## FACT SHEET

### EXCEPTIONS TO MANDATORY DESIGN STANDARDS

Prepared by:

\_\_\_\_\_  
Brian Stephenson, P. E.  
Dokken Engineering



Submitted by \_\_\_\_\_ Date \_\_\_\_\_ Telephone (916) 858-0642  
Richard Liptak, P.E.,  
Project Manager, Dokken Engineering

Recommended  
for Approval \_\_\_\_\_ Date \_\_\_\_\_ Telephone (530) 741-4403  
Bruce Capaul,  
Chief, Office of Encroachment Permits

Concurrence by \_\_\_\_\_ Date \_\_\_\_\_ Telephone (916) 274-6013  
Barbara Reenan,  
Chief, Office of Design - West

Approved by \_\_\_\_\_ Date \_\_\_\_\_ Telephone \_\_\_\_\_  
John Steele  
Project Development Coordinator  
Design and Local Programs

## **1. PROPOSED PROJECT AND NONSTANDARD FEATURES**

### **A. Project Description:**

This project proposes to improve pedestrian and bicycle circulation and safety on State Route 28 (SR-28) within Kings Beach in Placer County. The project limits along SR-28 are from the intersection of SR-28 and SR-267 moving east to the intersection of SR-28 and Chipmunk Street (see Attachment A – Vicinity Map). The County of Placer Department of Public Works (PCDPW) initiated the project.

SR-28 would remain a four-lane cross section roadway with two 3.3 m (11 ft) traffic lanes for the eastbound and westbound directions until just east of the Fox Street intersection. Between the Fox Street and Chipmunk Street intersections, SR-28 would become a three-lane roadway, with one traffic lane for each direction and a two-way-left-turn lane. Traffic signals would be installed/modified at SR-267, Bear Street and Coon Street. Left turn lanes would be provided at SR-267, Bear Street, Fox Street, Coon Street and Chipmunk Street. A 1.5 m (5 ft) bike lane and 2.4 m (8 ft) parking lane would be created in each direction. Along the roadway, a 1.7 m (5.6 ft) sidewalk would be installed on both sides of SR-28. Enhanced and clearly marked pedestrian crossings at each intersection (SR-267, Bear Street, Coon Street, Fox Street, and Chipmunk Street) would also be included as part of this alternative.

### **B. Existing Highway:**

#### **State Route 28**

The existing mainline of SR-28 within the project limits is a four-lane facility. Signalized intersections exist at SR-267 and Coon Street. The project is confined to a 24.4 m (80-ft) right of way with existing buildings lining each side of the street. Improvements such as curb and gutter, sidewalks, and lighting are non-existent. Private driveways are not well defined, with asphalt parking areas blending into the roadway. Pedestrian and bicycle pathways are non-existent except for adjacent to the State Park parking lot. The lack of pedestrian and bicycle facilities along with the traffic congestion, leads to a situation of difficult pedestrian and bicycle movement through the commercial core.

There is a long history of large peak time traffic flows and local street delays in and around Kings Beach. Non standard roadway geometrics, closely spaced intersections, numerous driveways, unrestricted and undefined on-street parking, undefined pedestrian and bicycle paths, and high traffic volumes all contribute to the existing conditions and create difficulty in making roadway improvements

**C. Safety Improvements:**

This project will construct the following safety improvements:

- Bicycle lanes on both sides of SR-28
- Installation of a signal at the Bear Street/SR-28 intersection
- Construction of sidewalks on both sides of SR-28 for pedestrian safety
- Turn pockets at intersection based upon traffic volumes
- Clearly marked parallel parking along SR-28 where there is sufficient width
- Clearly marked cross walk locations for pedestrian and bicycle mobility

**D. Total Project Cost:**

Roadway	\$ 30.3 million
Right of Way	\$ 0.7 million
Signalization	<u>\$ 0.3 million</u>
<b>Total</b>	<b>\$ 31.3 million</b>

**2. FEATURES REQUIRING AN EXCEPTION**

**Design Exception Feature #1:**

**Nonstandard Feature:**

The proposed 2 lanes in each direction are 3.3 m (11 ft) in width for the entire project length, 1560 m (5118 ft).

**Standard for Which Exception is Requested:**

Highway Design Manual Topic 301.1 states that "... The basic lane width for new construction on ... multilane highways ... shall be 3.6 m (12 feet).

**Reason for Requesting Exception:**

The nonstandard feature being requested is to avoid the acquisition of historical properties along SR-28 in Kings Beach. Land within the Tahoe Basin is held at a premium, and the purchase and acquisition of buildings is not feasible for this project. The need and purpose statement of this project is to improve the pedestrian and bicycle mobility, and improve the aesthetic character of the Kings Beach Commercial Core area. Building demolition for traffic capacity improvements is outside of the need and purpose of the stated project.

In support of this exception are the following points:

- Current posted speed limits are 30 mph, and the project location is in the commercial core of the Kings Beach community, creating an urban like setting for the motorist.

- The addition of turn pockets at key intersections and signalization of the Bear Street intersection will improve the traffic flow through the project area intersections.
- The right of way required to have 3.6 m (12 ft) lanes would require the acquisition of numerous building, some of which have historical significance.
- The project will construct marked bike lanes along SR-28 and improve the pedestrian crossings across SR-28.

**Added Cost to Make Standard:**

The added cost to bring the lane widths up to standard would include design, right of way acquisition and additional roadwork. The cost for this additional work is estimated as follows:

Additional right of way acquisition:	\$ 2.0 million
Additional road construction including design	\$ 0.5 million

**Design Exception Feature #2:**

**Nonstandard Feature:**

The proposed right shoulder width in each direction is 1.5 m (5 ft) in width in the following locations:

- SR-267 to Secline Street.
- Eastbound direction near Deer Street.
- Bear Street intersection.
- Coon Street intersection.
- Eastbound direction near Fox Street.
- Chipmunk Street intersection.

Approximate total length of 1.5 m (5 ft) shoulder width – 720 m (2362 ft)

**Standard for Which Exception is Requested:**

Highway Design Manual Topic 302.1, Index 302.1, Shoulder Widths, Conventional Highways, Multilane undivided, lists the right shoulder shall be 2.4 m (8 ft).

**Reason for Requesting Exception:**

The nonstandard feature being requested is to avoid the acquisition of historical properties along SR-28 in Kings Beach. Land within the Tahoe Basin is held at a premium, and the purchase and acquisition of buildings is not feasible for this project. The need and purpose statement of this project is to improve the pedestrian and bicycle mobility, and improve the aesthetic character of the Kings Beach Commercial Core area. Building demolition is outside of the need and purpose of the stated project.

In support of this exception are the following points:

- Current posted speed limits are 30 mph, and the project location is in the commercial core of the Kings Beach community leading to an urban like feeling to the motorist.
- The areas through the project corridor that have on-street parking are designed to be 3.9 m (13 ft) is shoulder width.
- The right of way required to have 2.4 m (8 ft) right shoulders would require the acquisition of numerous building, some of which have historical significance.

**Added Cost to Make Standard:**

The added cost to bring the shoulder widths up to standard would include design, right of way acquisition and additional roadwork. The cost for this additional work is estimated as follows:

Additional right of way acquisition:	\$ 2.0 million
Additional road construction including design	\$ 0.5 million

**3. TRAFFIC DATA**

Existing (2002) and Projected (2028) Average Daily Traffic volumes are shown below:

*Average Daily Traffic, State Route 28*

Location / Description	2002	2028
SR-28 between SR-267 and Coon Street	19,100	24,000

**4. ACCIDENT ANALYSIS**

Fatal, Fatal plus Injuries and Total accident rates within the project area are higher than average rates for similar facilities for this stretch of SR 28

**Summary of Accident Rate Data**

Location	Total Accidents	Actual Rates			Average Rates		
		F	F+I	Total	F	F+I	Total
SR 28	103	0.0	1.61	5.03	0.036	0.68	1.65

+ Rates are # of accidents/million vehicle miles

Accident data was obtained from Caltrans Traffic Accident Surveillance and Analysis System (TASAS) Table B for the thirty-six (36) month time period from 2002-04-01 to 2005-03-31.

The proposed improvements in this area will likely reduce the frequency of rear end accidents by providing storage space for turning vehicles allowing them to be out of the through traffic lanes.

The non-standard feature 3.3 m (11 ft) lanes should not contribute to the major cause or type of accidents occurring.

The non-standard feature 1.5 m (5 ft) right shoulders do not contribute to the major cause or type of accidents occurring.

## **5. INCREMENTAL IMPROVEMENTS**

There are no practical, incremental improvements that are intermediate in scope and cost, between the proposed project and the implementation of the full standard alternative.

## **6. FUTURE CONSTRUCTION**

Currently there are no planned or programmed projects that would correct the proposed non-standard lane widths in the vicinity of this project.

Currently there are no planned or programmed projects that would correct the proposed non-standard right shoulder widths in the vicinity of this project.

## **7. PROJECT REVIEWS, CONCURRENCE**

## **8. ATTACHMENTS**

- A.** Vicinity Map
- B.** Project Layout Sheets
- C.** Project Cross Section
- D.** Project Area Photos

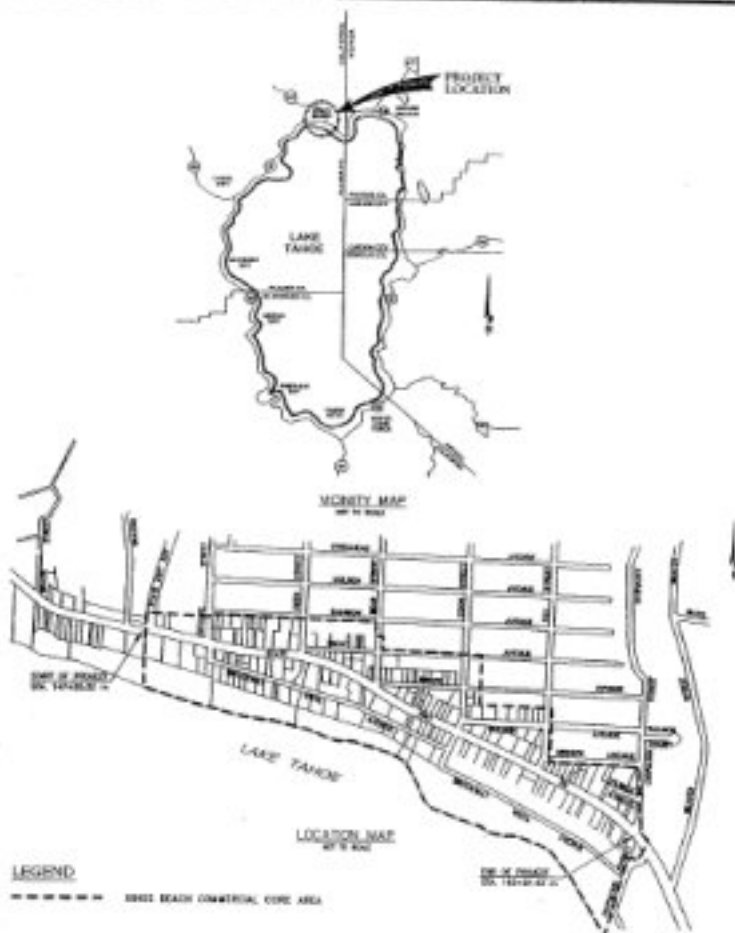


Figure 1.  
VICINITY AND LOCATION MAP

# ALTERNATIVE 3 - ROADWAY CROSS SECTION:

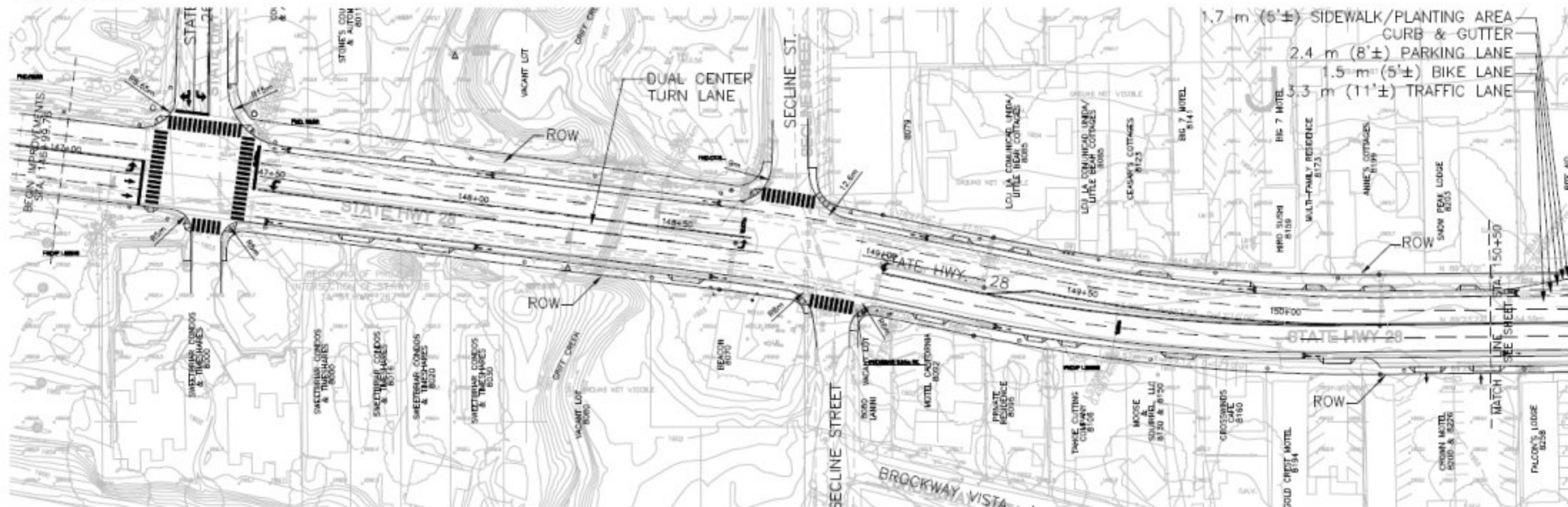
2 - 3.3 m (11') TRAFFIC LANES EACH DIRECTION  
 1 - 1.5 m (5') BIKE LANE EACH DIRECTION  
 1 - 2.4 m (8') PARKING LANE EACH DIRECTION  
 1 - 1.7 m (5') SIDEWALKS EACH DIRECTION  
 (SEE SHEET 12 FOR TYPICAL X-SECTION - ALTERNATIVE 3)



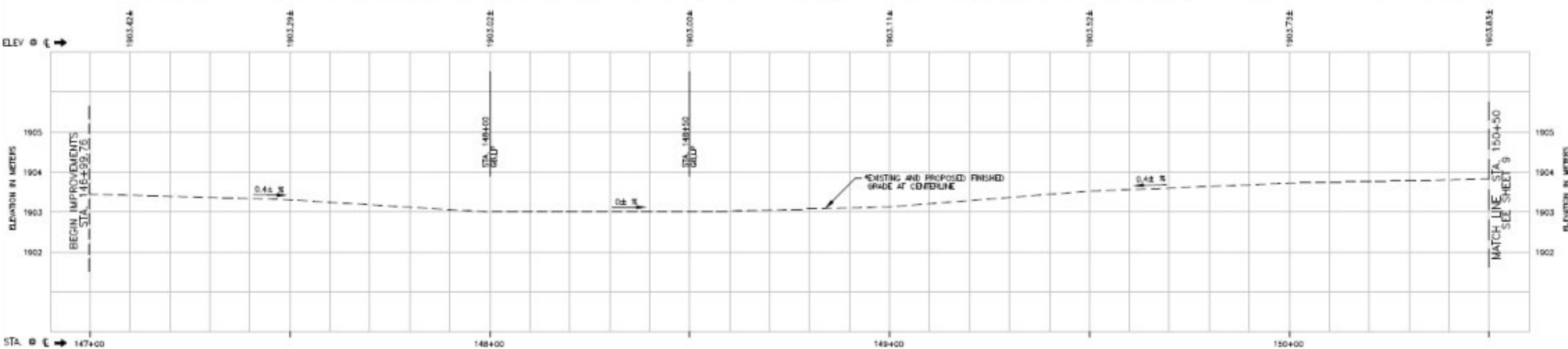
DATE	DESCRIPTION AND SHEET NO.	APPROVED BY	DATE

THE COUNTY OF PLACER OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF ELECTRONIC COPIES OF THIS PLAN SHEET.

SCALE IN METERS  
 1 : 500  
 1 : 500 (22" x 34" Plan Sheets)  
 1 : 1000 (11" x 17" Plan Sheets)



1.7 m (5') SIDEWALK/PLANTING AREA  
 CURB & GUTTER  
 2.4 m (8') PARKING LANE  
 1.5 m (5') BIKE LANE  
 3.3 m (11') TRAFFIC LANE



PLAN SCALE: 1:500  
 PROFILE SCALE: 1:500  
 HORIZ. 1:500  
 VERT. 1:50

CONTRACT NO. 7310B  
 DESIGNED: BRS  
 DRAWN: BRS  
 CHECKED: BRS  
 RECORD: BRS  
 DATE: 12/03/06



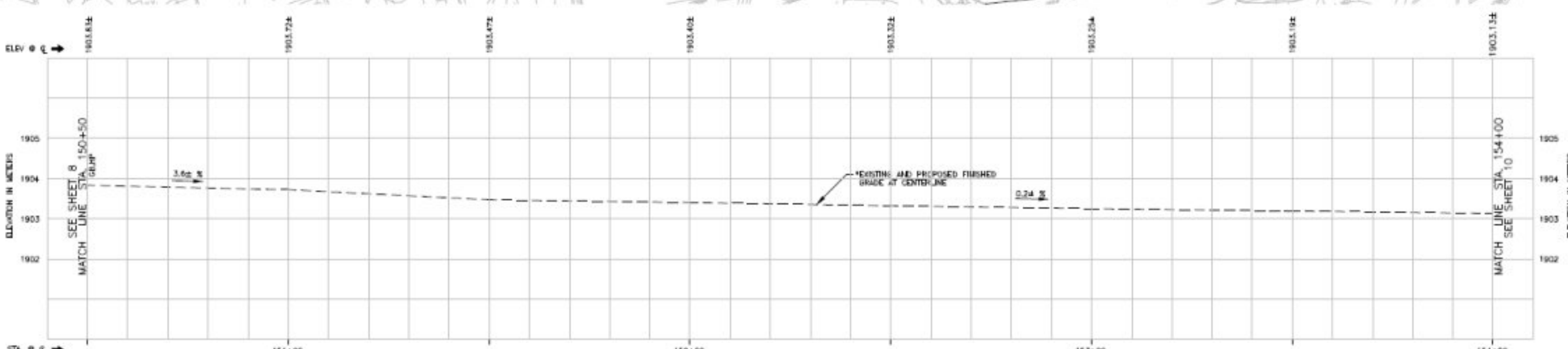
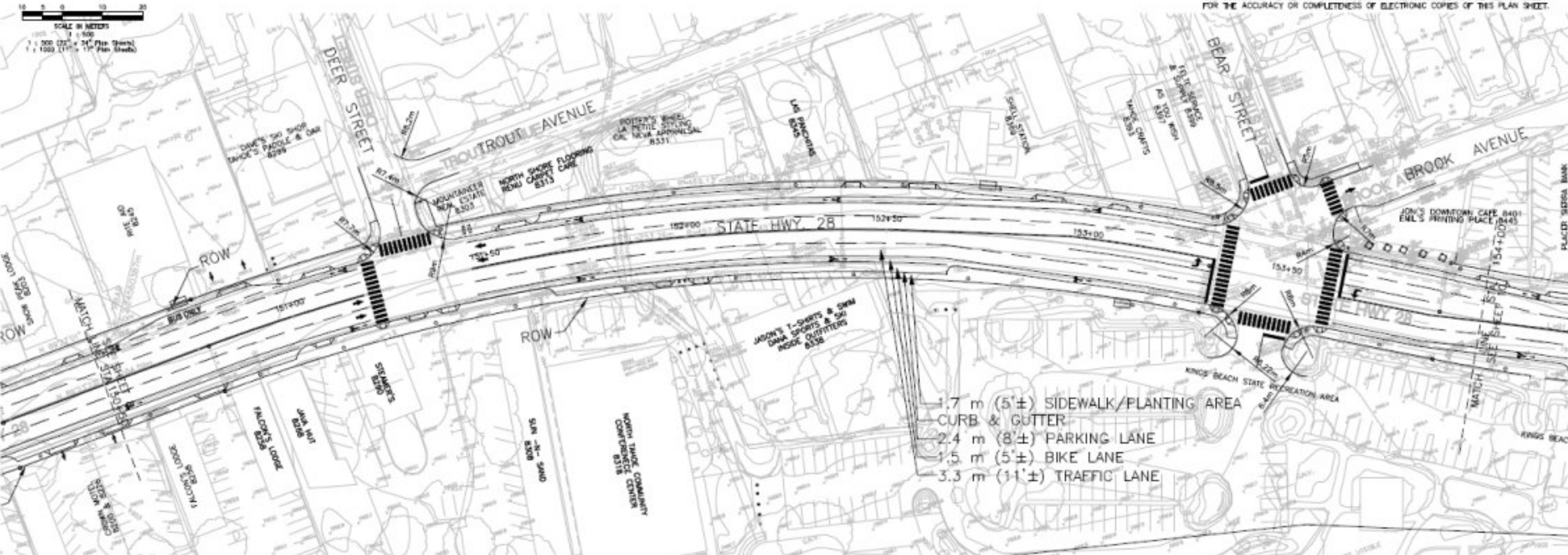
# ALTERNATIVE 3 - ROADWAY CROSS SECTION:

2 - 3.3 m (11') TRAFFIC LANES EACH DIRECTION  
 1 - 1.5 m (5') BIKE LANE EACH DIRECTION  
 1 - 2.4 m (8') PARKING LANE EACH DIRECTION  
 1 - 1.7 m (5') SIDEWALKS EACH DIRECTION  
 (SEE SHEET 12 FOR TYPICAL X-SECTION - ALTERNATIVE 3)



REVISION #	DATE	DESCRIPTION AND SHEET NO.	APPROVED BY	DATE

THE COUNTY OF PLACER OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF ELECTRONIC COPIES OF THIS PLAN SHEET.



PLAN SCALE: 1:500  
 PROFILE SCALE: 1:500  
 HORIZ. SCALE: 1:500  
 VERT. SCALE: 1:50

DATE: 12/07/06  
 DESIGNED BY: BRS  
 DRAWN BY: BRS  
 CHECKED BY: RFL  
 RECORDED BY: BRS

CONTRACT NO. 73108

COUNTY OF PLACER  
 DEPARTMENT OF PUBLIC WORKS  
 KINGS BEACH COMMERCIAL CORE IMPROVEMENT PROJECT  
 FEASIBILITY STUDY - ALTERNATIVE 3 - PLAN, PROFILE & STRIPING LAYOUT

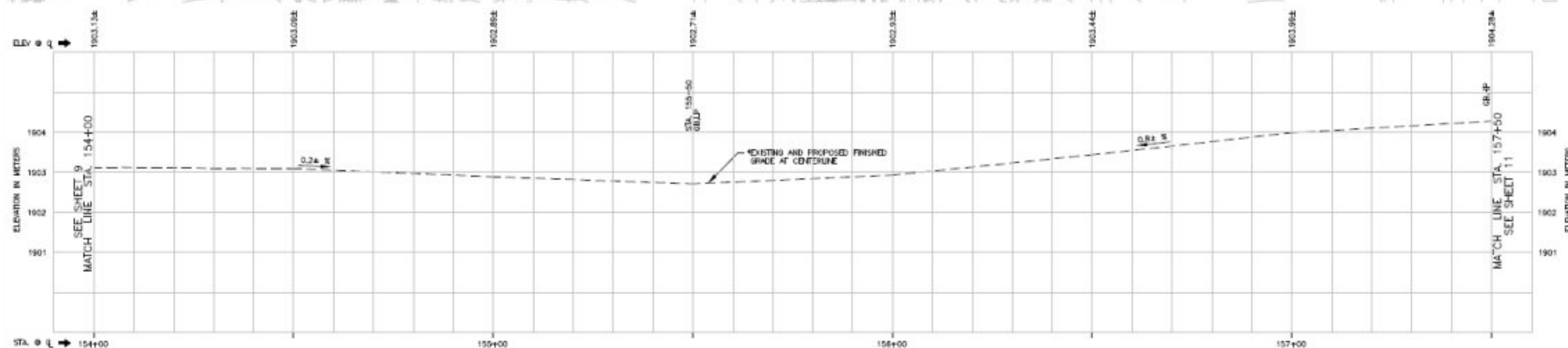
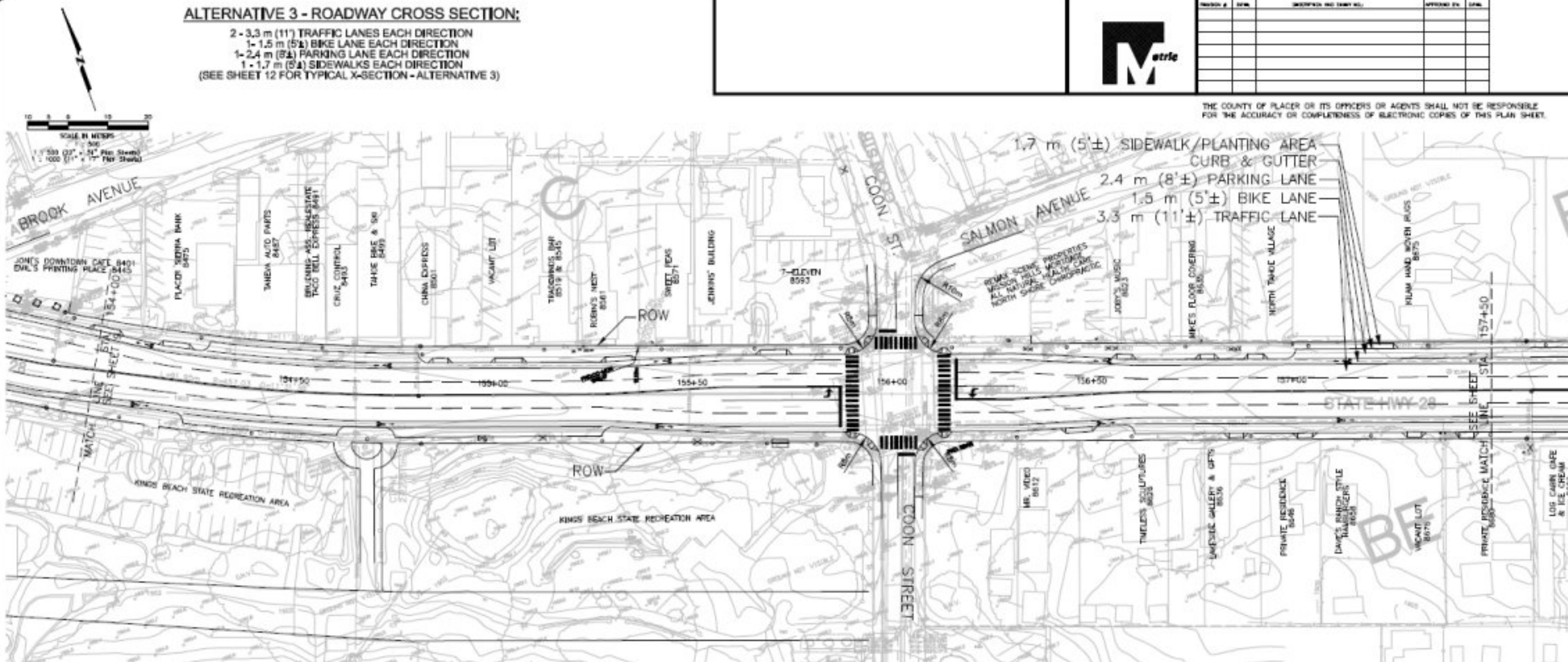
SHEET NO. 8 OF 24

# ALTERNATIVE 3 - ROADWAY CROSS SECTION:

2 - 3.3 m (11') TRAFFIC LANES EACH DIRECTION  
 1 - 1.5 m (5') BIKE LANE EACH DIRECTION  
 1 - 2.4 m (8') PARKING LANE EACH DIRECTION  
 1 - 1.7 m (5') SIDEWALKS EACH DIRECTION  
 (SEE SHEET 12 FOR TYPICAL X-SECTION - ALTERNATIVE 3)



THE COUNTY OF PLACER OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF ELECTRONIC COPIES OF THIS PLAN SHEET.



PLANNING & DESIGN

DESIGNED BY: BPS

DRAWN BY: BPS

CHECKED BY: BTL

RECORD BY: BPS

DATE: 12/02/2016

CONTRACT NO. 73108

SHEET NO. 9

PROJECT: KINGS BEACH COMMERCIAL CORE IMPROVEMENT PROJECT

FEASIBILITY STUDY - ALTERNATIVE 3 - PLAN, PROFILE & STRIPING LAYOUT

PLANNING & DESIGN

DESIGNED BY: BPS

DRAWN BY: BPS

CHECKED BY: BTL

RECORD BY: BPS

DATE: 12/02/2016

CONTRACT NO. 73108

SHEET NO. 9

PROJECT: KINGS BEACH COMMERCIAL CORE IMPROVEMENT PROJECT

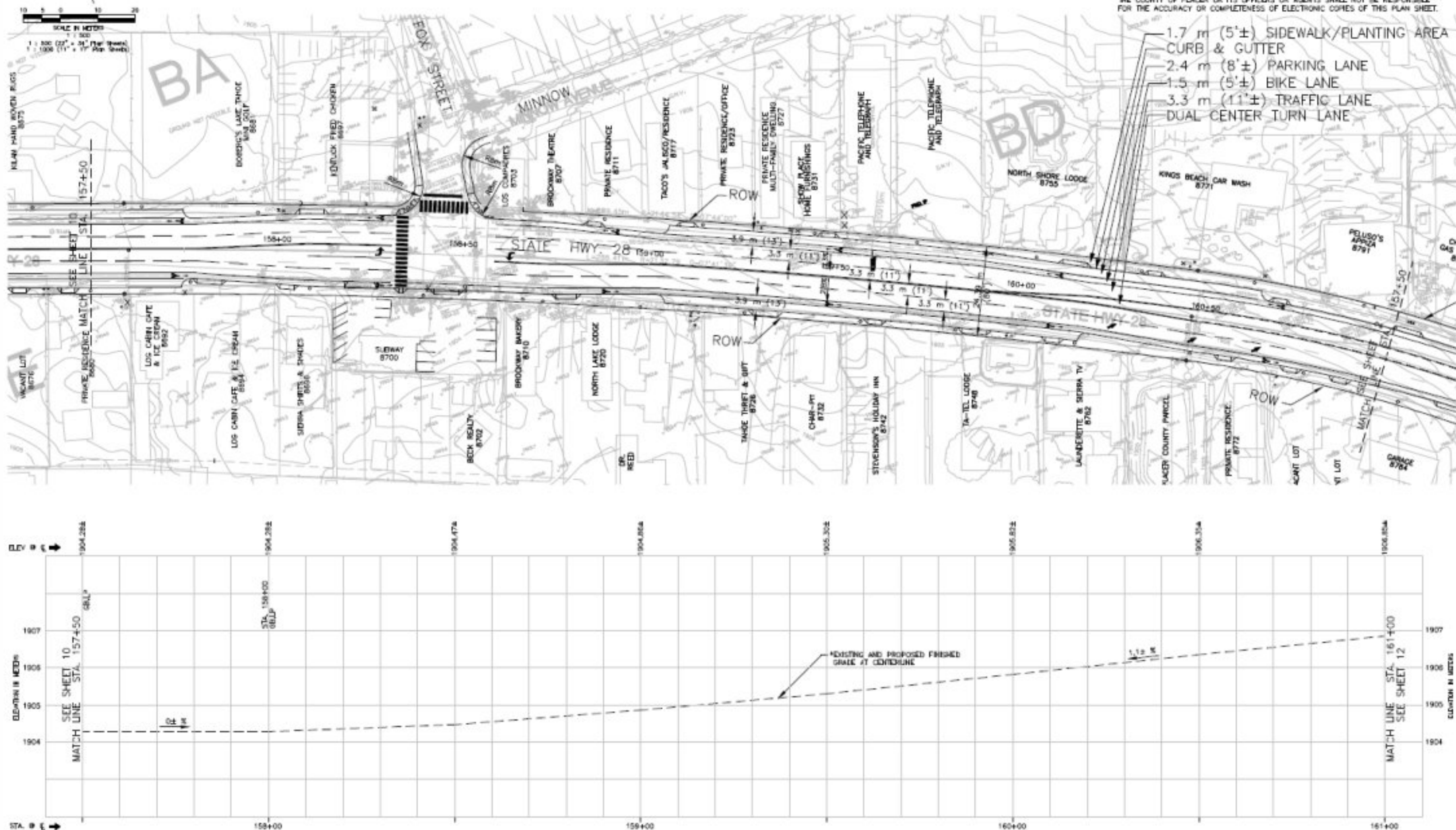
FEASIBILITY STUDY - ALTERNATIVE 3 - PLAN, PROFILE & STRIPING LAYOUT



2 - 3.3 m (11') TRAFFIC LANES EACH DIRECTION  
1 - 1.5 m (5') BIKE LANE EACH DIRECTION  
1 - 2.4 m (8') PARKING LANE EACH DIRECTION  
1 - 1.7 m (5') SIDEWALKS EACH DIRECTION  
(SEE SHEET 12 FOR TYPICAL X-SECTION - ALTERNATIVE 3)

[illegible]

THE COUNTY OF PLACER OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF ELECTRONIC COPIES OF THIS PLAN SHEET.



PLAN SCALE: 1"=500'  
 PROFILE SCALE:  
 HORIZ: 1"=500'  
 VERT: 1"=50'

CONTRACT NO.	DATE
73108	12/01/2006


 COUNTY OF PLACER      DEPARTMENT OF PUBLIC WORKS  
**KINGS BEACH COMMERCIAL CORE IMPROVEMENT PROJECT**  
 FEASIBILITY STUDY - ALTERNATIVE 3 - PLAN, PROFILE & STRIPING LAYOUT

SHEET NO.  
10  
OF  
24

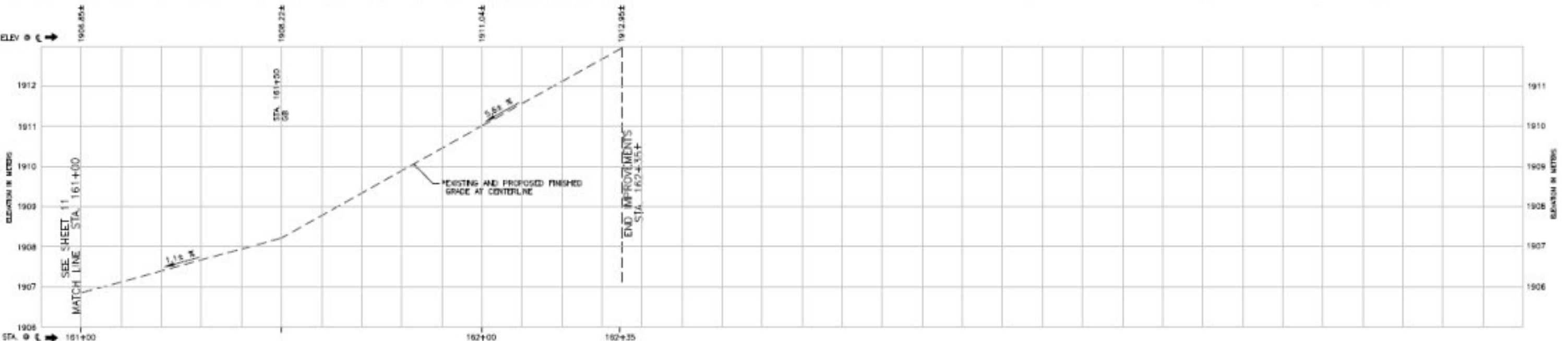
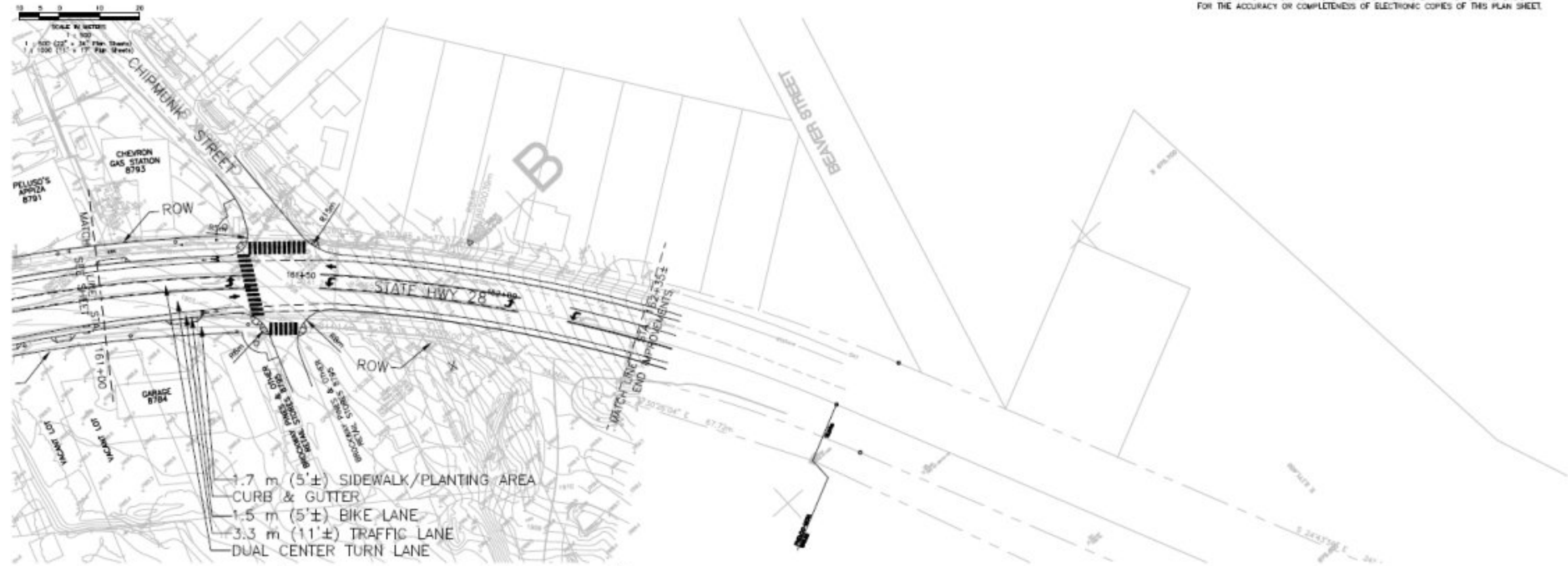
# ALTERNATIVE 3 - ROADWAY CROSS SECTION:

2 - 3.3 m (11') TRAFFIC LANES EACH DIRECTION  
 1 - 1.5 m (5') BIKE LANE EACH DIRECTION  
 1 - 2.4 m (8') PARKING LANE EACH DIRECTION  
 1 - 1.7 m (5') SIDEWALKS EACH DIRECTION  
 (SEE SHEET 12 FOR TYPICAL X-SECTION - ALTERNATIVE 3)



REVISION #	DATE	DESCRIPTION AND SHEET NO.	APPROVED BY	DATE

THE COUNTY OF PLACER OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF ELECTRONIC COPIES OF THIS PLAN SHEET.

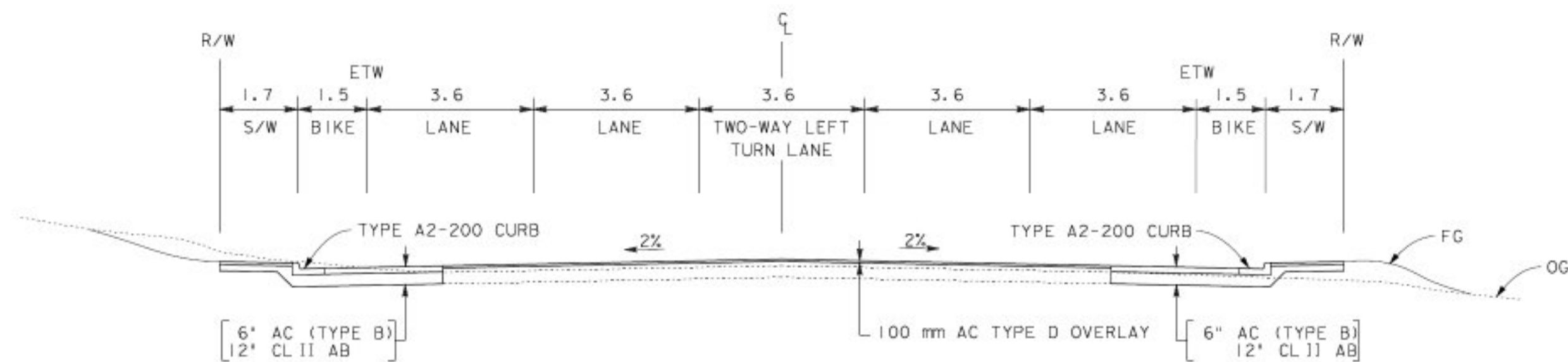


PLAN SCALE: 1:500  
 PROFILE SCALE: 1:500  
 HORIZ: 1:500  
 VERT: 1:50

CONTRACT NO. 7310B  
 DATE: 12/01/08  
 DESIGNED: BWS  
 DRAWN: BWS  
 CHECKED: RTL  
 RECORDED: BWS

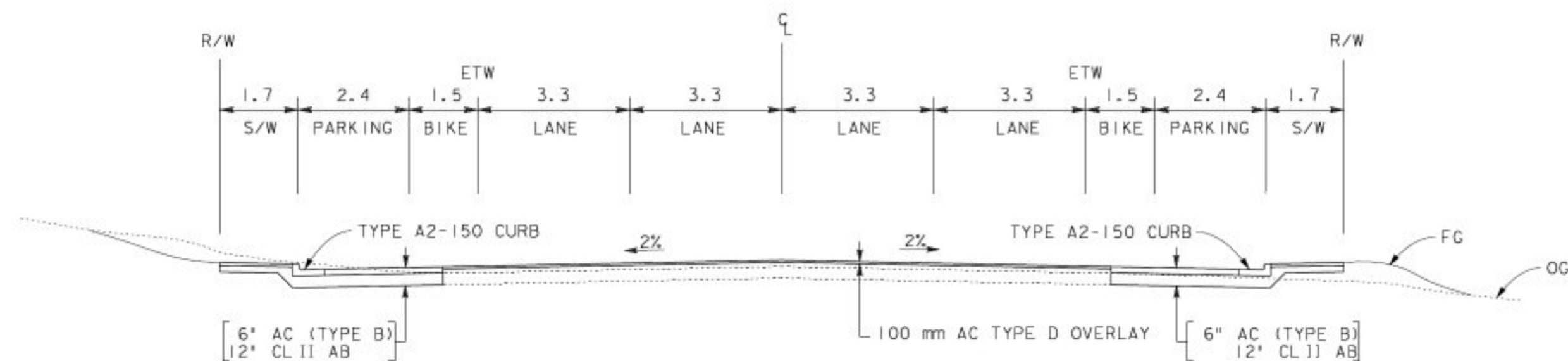
COUNTY OF PLACER  
 DEPARTMENT OF PUBLIC WORKS  
 KINGS BEACH COMMERCIAL CORE IMPROVEMENT PROJECT  
 FEASIBILITY STUDY - ALTERNATIVE 3 - PLAN, PROFILE & STRIPING LAYOUT

SHEET NO. 11 OF 24



### ALT 3 - SR 28 TURN LANE AREAS AND NO PARKING

STA 146+87 TO 148+75



### ALT 3 - SR 28 SR 267 TO CHIPMUNK

STA 146+87 TO 162+45

PLAN SCALE: SCALE  
PROFILE SCALE: SCALE  
HORIZ: NA  
VERT: NA

DATE: 12/01/06  
DESIGNED: REL  
DRAWN: CHECKED: BRS  
RECORD: DRAWING

DEPARTMENT OF PUBLIC WORKS  
COUNTY OF PLACER  
KINGS BEACH COMMERCIAL CORE IMPROVEMENT PROJECT  
FEASIBILITY STUDY - ALTERNATIVE 3 - TYPICAL SECTIONS

SHEET NO. 12 OF 24











